

ABSTRACT

There is provided a catalyst for dimethyl carbonate synthesis which has a high conversion rate under the supercritical condition of  $\text{CO}_2$  and can be handled easily.

- 5 The catalyst for dimethyl carbonate is obtained by loading  $\text{SO}_4^{2-}$  or  $\text{PO}_4^{3-}$  on a carrier composed of a compound having a solid acid site, and is used to produce dimethyl carbonate from acetone dimethyl carbonate and  $\text{CO}_2$  in a supercritical state. The component having a solid acid site is
- 10 preferably one or more of  $\text{ZrO}_2$ ,  $\text{Al}_2\text{O}_3$ , and  $\text{TiO}_2$ .